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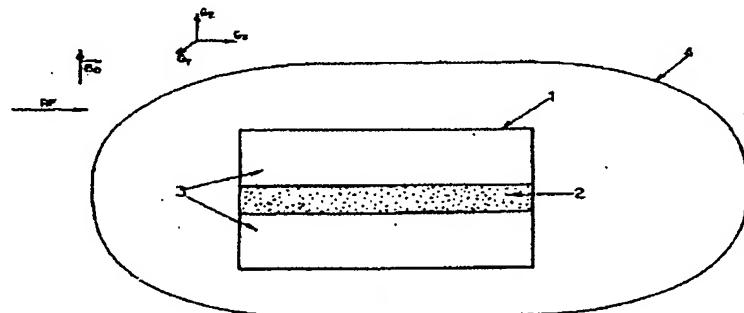
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(54) Title: METHOD FOR ACQUIRING ELECTROMAGNETIC SIGNALS AND CONTRAST PRODUCT THEREFOR

(54) Titre : PROCÉDÉ D'ACQUISITION DE SIGNAUX ELECTROMAGNETIQUES ET PRODUIT DE CONTRASTE POUR UNE TELLE ACQUISITION



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(57) **Abstract:** The invention concerns a system capable of generating a magnetic induction  $B_0$  comprising gradients ( $G_x, G_y, G_z$ ) in certain directions, transmitting radio frequency wave pulse sequences (RF) perpendicular to  $B_0$  in a range of adjustable frequencies, and detecting electromagnetic signals received from a body part (4). The method consists in: injecting a contrast product in said body part, capable of being temporarily fixed in an observed zone (1), and comprising an element capable of causing chemical displacement of a resonance frequency of water hydrogen protons; exciting said body part, using a radio frequency wave pulse sequence in a range of frequencies adjusted on the basis of the magnetic induction  $B_0$  and the chemical displacement for some of said waves; detecting the electromagnetic signals received in said body part, substantially corresponding to the magnetic resonance signals of the protons of the observed zone having undergone the chemical displacement.

(57) **Abrégé :** Un système peut générer une induction magnétique  $B_0$  comprenant des gradients ( $G_x, G_y, G_z$ ) dans certaines directions, émettre des séquences d'impulsions d'ondes de radiofréquence (RF) perpendiculaires à  $B_0$  dans une gamme de fréquences réglables, et détecter des signaux électromagnétiques reçus depuis une portion

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